Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

1   1.   (Previously Presented) A method for optimizing response time of physical devices
2   in a data storage system comprising:
3   collecting statistics for each of the physical devices;
4   determining from the statistics n most active of the physical devices; and
5   for each of the n most active of the physical devices, adjusting a mirror service
6   policy associated with one or more mirrored logical volumes serviced by the physical
7   device to reduce seek time.

1   2.   (Original) The method of claim 1, wherein the statistics include utilization and
2   wherein adjusting is performed if the utilization of the physical device is greater than a
3   threshold value.

1   3.   (Original) The method of claim 1, wherein adjusting comprises:
2   using a cost function analysis to determine that workload assigned to the one or
3   more selected mirrored logical volumes according to a current mirror service policy can
4   be re-assigned to a corresponding mirrored copy according to a new mirror service
5   policy, the cost function analysis indicative of seek time and involving the selected
6   physical device and any physical device on which a mirrored copy resides.

1   4.   (Original) The method of claim 3, wherein the physical devices involved in the
2   cost function analysis are physical mirrors.

1   5.   (Original) The method of claim 3, wherein using comprises;
2   computing cost functions for each of the physical devices involved in the cost
3   function analysis and determining a maximum value from the computed cost functions,
4   based on the current mirror service policy and the new mirror service policy.

1   6.   (Original) The method of claim 5, wherein using comprises:

2   determining that the reassignment of workload can be made if the maximum value

3   based on the new mirror service policy is less than the maximum value based on the

4   current policy.

1   7.   (Original) The method of claim 6, wherein adjusting comprises processing the

2   one or more logical volumes in a sequence beginning with the outermost logical volume

3   bordering logical volumes serviced by another physical device.

1   8.   (Original) The method of claim 7, wherein, for each successive one of the

2   processed logical volumes, the new mirror service policy of an immediate predecessor of

3   the processed logical volumes is used as the current mirror service policy for the cost

4   function analysis.

1   9.   (Original) The method of claim 2, wherein the threshold value comprises fifty

2   percent.

1   10.   (Previously Presented) A computer program product residing on a computer

2   readable medium for optimizing response time of physical devices in a data storage

3   system, comprising instructions for causing a computer to:

4   collect statistics for each of the physical devices;

5   determine from the statistics n most active of the physical devices; and

6   for each of the n most active of the physical devices, adjust a mirror service policy

7   associated with a mirrored logical volume services by the physical device to reduce seek

8   time.

1   11.   (Currently Amended) A data storage system comprising:

2   physical devices having mirror logical volumes stored thereon;

3   a storage controller for controlling access to the physical devices; and

4   wherein the storage controller collects for the physical devices statistics including

5   utilization, determines from the statistics n most active of the physical devices and, for

6   each of the n of the most active of the physical devices, adjusts a mirror service policy

7 associated with a mirrored logical volume serviced by the physical device to minimize

8 seek time when the utilization is greater than a threshold value.

1 12.   (Previously Presented) The computer program of claim 10 wherein the mirror

2 service policy is adjusted in response to simulation of a new mirror service policy.

1 13.   (Currently Amended) The computer program of claim 12 wherein the mirror

2 service policy is adjusted in response to a cost function analysis of the-a selected one of

3 the n most active physical devices as a result of a current mirror service policy and a cost

4 function analysis of the selected physical device as a result of the new mirror service

5 policy.

1 14.   (Previously Presented) The computer program of claim 11 wherein the mirror

2 service policy is adjusted in response to simulation of a new mirror service policy.

1 15.   (Currently Amended) The computer program of claim 14 wherein the mirror

2 service policy is adjusted in response to a cost function analysis of the-a selected one of

3 the n most active physical devices as a result of a current mirror service policy and a cost

4 function analysis of the selected physical device as a result of the new mirror service

5 policy.

1 16.   (New) The method of claim 1 further comprising sorting the n most active of the

2 physical devices by activity level and wherein the mirror service policy is adjusted for

3 each of the n most active of the physical devices in the sorted order.

1 17.   (New) The computer program product of claim 10 further comprising instructions

2 for causing a computer to sort the n most active of the physical devices by activity level

3 and wherein the mirror service policy is adjusted for each of the n most active of the

4 physical devices in the sorted order.

1   18.   (New) The data storage system of claim 11 wherein the storage controller sorts

2   the n most active of the physical devices by activity level and wherein the mirror service

3   policy is adjusted for each of the n most active of the physical devices in the sorted order.